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Notice of Allowability	Application No.	Applicant(s)	
	10/723,517	WON ET AL.	
	Examiner	Art Unit	
	Michael Trinh	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment and RCE filed 12/15/06 & 11/14/05.
2. ☒ The allowed claim(s) is/are 1-5, 10, 13-17 and 22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.


THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |


Michael Trinh
Primary Examiner

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DETAILED ACTION

*** This office action is in response to Applicant's RCE filed December 15, 2005 and Amendment submitted November 14, 2005. Claims are 1-5,10,13-17, and 22 are pending.

Allowable Subject Matter

1. Claims 1-5,10,13-17, and 22 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:
Applicant's amendment and convincing remarks filed November 14, 2005 have overcome the rejections in the last office action. The references of record including Papasouliotis (6,846,745), Hanawa (5,753,044), etc., alone or in combination, do not fairly anticipatively disclose each and every aspect of the claimed high-density plasma CVD process, or fairly make a prima facie obvious case of the claimed process, in combination with other processing claimed limitations as recited in base claims 1 and 13, the inclusion of injecting first main process gases including a silicon source gas, an oxygen gas, a nitrogen free chemical gas and a hydrogen gas (helium gas also included the first main process gases of claim 13) into the process chamber to generate a high density plasma over the semiconductor substrate and to simultaneously form a silicon oxide layer on the semiconductor substrate; after injecting of the first main process gases, injecting second main process gases including a silicon source gas, an oxygen gas, a nitrogen free chemical gas, a hydrogen gas and a helium gas (helium gas not included the second main process gases of claim 13); and after injecting of the second main process gases, injecting third main process gases including a silicon source gas, an oxygen gas, and a hydrogen gas, wherein the semiconductor substrate is heated to a temperature in a range of about 550°C to about 700°C.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Trinh whose telephone number is (571) 272-1847. The examiner can normally be reached on M-F: 9:00 Am to 5:30 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571) 272-2429. The central fax phone number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Oacs-102

A handwritten signature in black ink, appearing to read "Michael Trinh".

Michael Trinh
Primary Examiner